MA2DF31

Silicon mesa type

For high frequency rectification

■ Features

- Super high speed switching characteristic: t_{rr} = 20 ns (typ.)
- Low noise type

■ Package

- Code
  TO-220D-B1
- Pin Name
  1: Cathode
  2: Anode

■ Marking Symbol: MA2DF31

■ Absolute Maximum Ratings T_a = 25°C

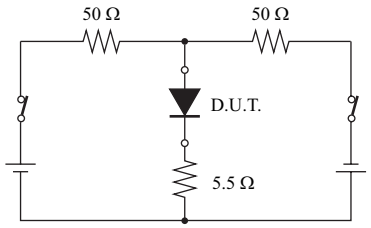
Parameter	Symbol	Rating	Unit
Repetitive peak reverse voltage	V_{RRM}	300	V
Non-repetitive peak reverse surge voltage	V_{RSM}	300	V
Forward current (Average) *1	$I_{F(AV)}$	5	A
Non-repetitive peak forward surge current *2	I_{FSM}	30	A
Junction temperature	T_j	+150	°C
Storage temperature	T_{stg}	-40 to +150	°C

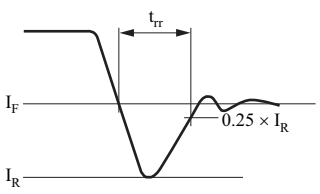
Note) *1: T_C = 25°C
*2: 50 Hz sine wave 1 cycle (Non-repetitive peak current)

■ Electrical Characteristics T_a = 25°C±3°C

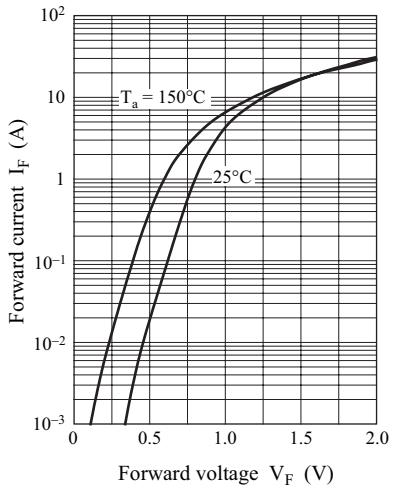
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Forward voltage	V_F	I_F = 5 A		1.0	1.3	V
Reverse current	I_{RRM}	V_{RRM} = 300 V			20	μA
Reverse recovery time *	t_{rr}	I_F = 0.5 A, I_R = 1.0 A I_{rr} = 0.25 A		20	30	ns
Thermal resistance (j-c)	$R_{th(j-c)}$				3.0	°C/W
Thermal resistance (j-a)	$R_{th(j-a)}$				63	°C/W

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7031 measuring methods for diodes.
2. This product is sensitive to electric shock (static electricity, etc.). Due attention must be paid on the charge of a human body and the leakage of current from the operating equipment.
3. *: t_{rr} measurement circuit

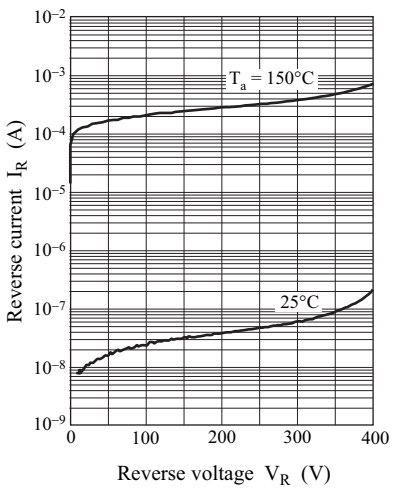




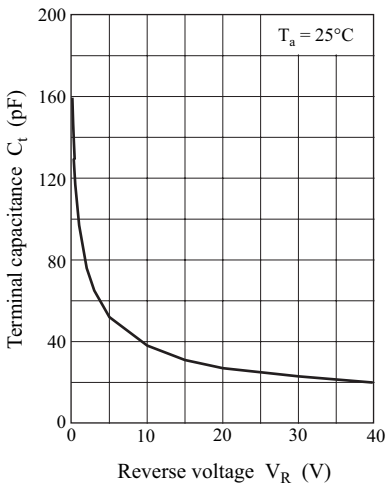
I_F — V_F



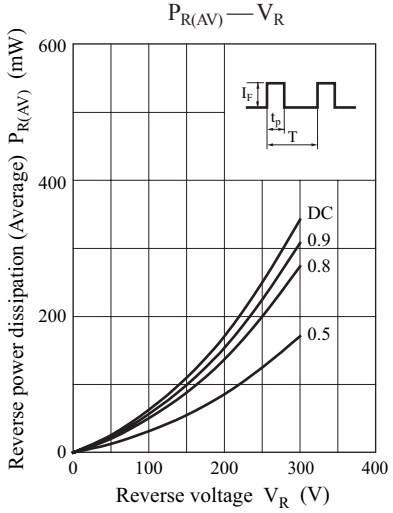
I_R — V_R



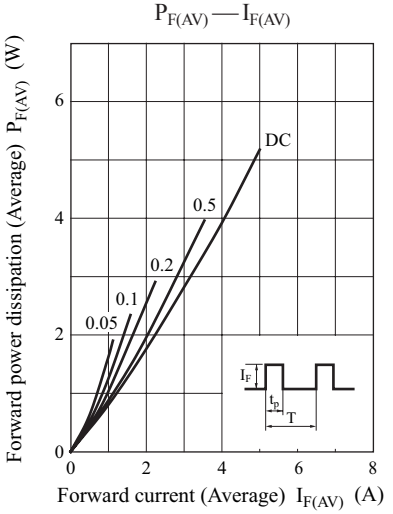
C_t — V_R



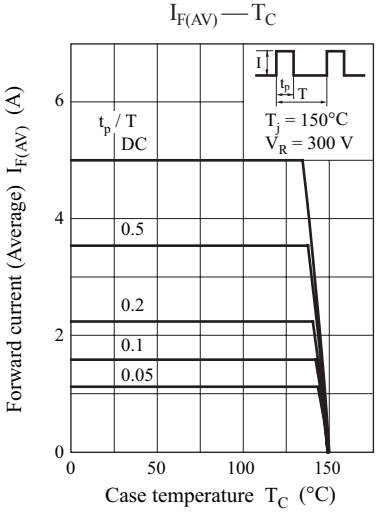
$P_{R(AV)}$ — V_R



$P_{F(AV)}$ — $I_{F(AV)}$

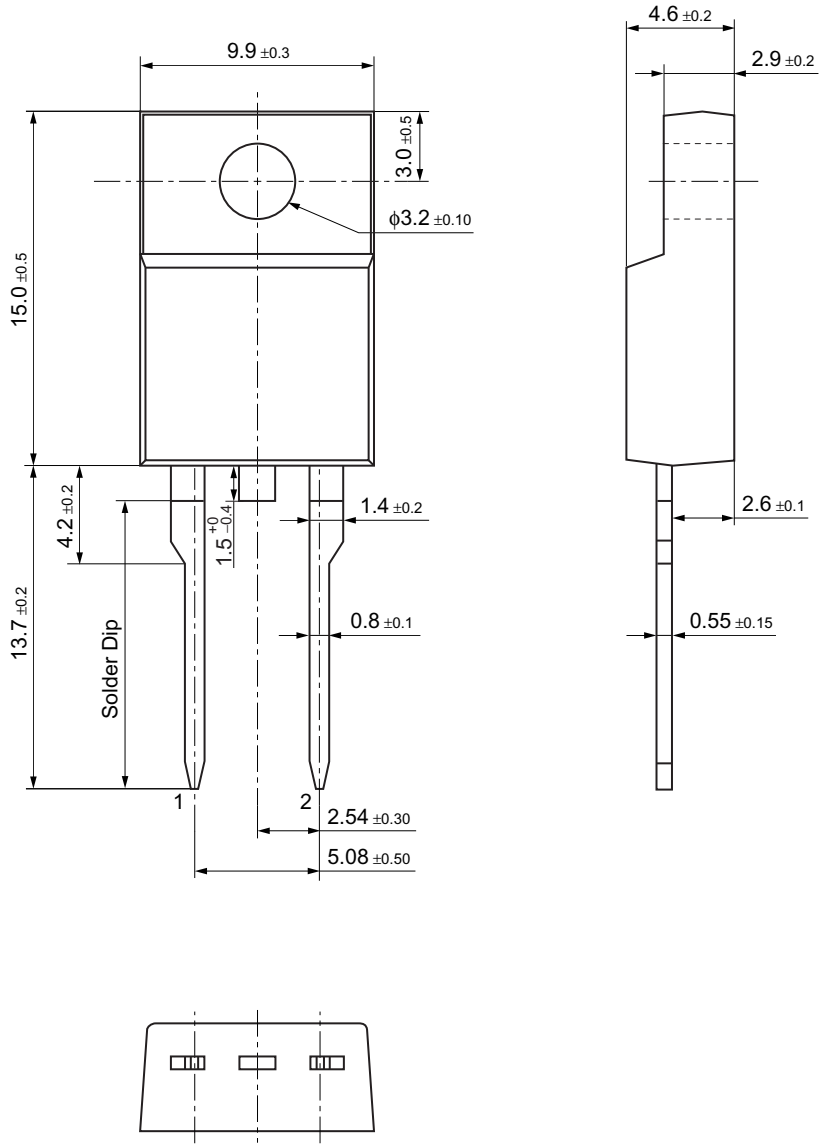


$I_{F(AV)}$ — T_C



TO-220D-B1

Unit: mm



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